

# Target Coordinates. Everywhere. Anytime.†

N 47° 24.540'  
E 009° 37.236'  
ELK +0425m

## STERNA

Non-Magnetic, Precision  
Target Location System  
(PTLS)

- † Ultralight, man-portable system < 4 kg (< 9 lbs)
- † Modularity for multi mission requirements
- † Limited collateral damage, high first-round-accuracy
- † Unrestricted, non-magnetic north finding
- † 72 Hours extended mission capability



vectronix 

# STERNA

## Non-Magnetic, Precision Target Location System (PTLS)

### Ultralight, man-portable system <4 kg (<9lbs)

STERNA's lightweight structure makes it easy to carry and deploy, with no expensive bolt-ons required to operate the unit. The man-portable capability of the STERNA enables the soldier to move at the same pace as his dismounted team.

### Modularity for multi-mission requirements

You want it all? No problem – set the payload of your choice on top of the STERNA TNF. The unique interface and the payload auto-detection makes the changing of payload types very easy.

### Limited collateral damage, high first-round-accuracy

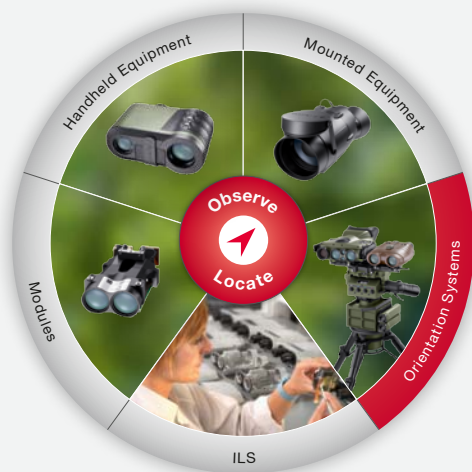
With the superb safety package of STERNA, clearance of fires can be greatly reduced. Troops may no longer have to wait for authorization to adjust fire and will be less exposed due to STERNA's first round, fire for effect capability. Soldiers can now effectively use dumb bombs as easily as laser guided bombs or JDAM to reduce the amount of exposure, while saving lives, rounds, and time in the heat of battle.

### Unrestricted, non-magnetic north finding

Vectronix' STERNA provides true north capabilities 24 hours per day, 7 days a week, in any environment, and works in all weather conditions. STERNA operates independently and does not require the soldier to carry any support resources to directly determine true north. Vectronix' STERNA does not require GPS, celestial bodies, survey, or landmarks, and can operate in a magnetically charged environment; thus, greatly reducing the cost of replacement parts. STERNA's independent true north capabilities permit the soldier to operate in virtually all battle and hostile environments.

### 72 Hours extended mission capability

STERNA's operational mode summary supports missions lasting up to 72 hours. STERNA's low-power consumption provides persistent and "unblinking" calibrations and missions, permitting the soldier to stay away from base for a longer period of time.



### Observe and Locate – Day and Night

Vectronix is a global leader in state-of-the-art optronic equipment, systems and sensors for military and civil applications. Nearly 90 years of Swiss tradition and excellence in optics and precision engineering are reflected in our products – handheld laser rangefinders and night vision devices, tripod-mounted orientation and positioning systems and sensor modules for our OEM partners. Our pride is to offer our customers accurate, reliable, high quality products with combat-proven low failure rate. We possess the flexibility to address specific customer requirements, create customized solutions and provide support over the complete product life cycle. Headquartered in Heerbrugg, Switzerland, Vectronix AG is owned by Sagem (Safran group) and maintains two subsidiaries with four branches in the US.



# Modularity for multi-mission requirements

STERNA systems are for precision missions, such as JDAM and LGB. Depending on your mission profile several system configurations are available:



## STERNA-M

The most lightweight precise target location system. All you need for a successful mission for less than 4 kg (<9lbs).

**Typical application:** Close Air Support



## STERNA-V

The performance upgrade for all missions with the well-proven VECTOR. Brilliant optics and far range join a non-magnetic high precision azimuth.

**Typical application:** Forward Observer/Forward Air Controller, ANGLICO, Joint Tactical Air Controller Party



## STERNA-J

The most lightweight all-rounder. The lightweight and compact multi-functional thermal imager LRTV makes a congenial partner to the STERNA TNF. Mission accomplished: 24 Hours precise target location under the worst weather and environmental conditions.

**Typical application:** Forward Observer/Forward Air Controller, ANGLICO, Joint Tactical Air Controller Party



## STERNA-V for commercial application

STERNA-V is a cost-effective alternative for orienting under harsh environmental conditions in GPS denied environments and without line of sight to known surveying points, like construction of forestry roads.



## Indication of azimuth accuracy

After each orientation, the azimuth accuracy is indicated by an  $1\sigma$  confidence interval

## + Safety Package

- Indication of azimuth accuracy
- Continuous monitoring of correct leveling and orientation
- "Dangerous Distance" function to protect the soldier and avoid collateral damage
- Multiple warnings and error messages
- Built-in test at every start-up or anytime at user's request
- A built-in Service Indicator provides a service message to assure continuous operation at maximum specifications.

# Technical Data

Setting up	STERNA-M	STERNA-V	STERNA-J
Fine leveling	Not required	Not required	Not required
Rough leveling <sup>1)</sup>	± 5°	± 5°	± 5°
<b>Angle Measurement</b>			
Sensor range, horizontal	6400 mil	6400 mil	6400 mil
Sensor range, vertical	+700 to -700 mils	+700 to -700 mils	+700 to -700 mils
Accuracy, horizontal angle (1σ)	1 mil	1 mil	1 mil
Accuracy, vertical angle (1σ)	± 3 mil	± 3 mil	± 5 mil
<b>Orientation Accuracy (1σ)</b>			
By gyroscope <sup>2)</sup>	< 5 mil 0° to 45° lat NS	< 5 mil 0° to 45° lat NS	< 5 mil 0° to 45° lat NS
	< 9 mil 45° to 75° lat NS	< 9 mil 45° to 75° lat NS	< 9 mil 45° to 75° lat NS
<b>Orientation Time</b>			
(excl. set-up time)	< 120 s	< 120 s	< 120 s
<b>Data Interface</b>			
External Fischer connector	RS232 and/or RS422/RS485 and/or USB <sup>3)</sup>	RS232 and/or RS422/RS485 and/or USB <sup>3)</sup>	RS232 and/or RS422/RS485 and/or USB <sup>3)</sup>
GPS protocol (via external Fischer connector)	PLGR/DAGR in-/output NMEA input only, MOSKITO GPS module	PLGR/DAGR in-/output NMEA input only	PLGR/DAGR in-/output NMEA input only, LRTV GPS Module
<b>Power Supply</b>			
On-board batteries, rechargeable or non-rechargeable	4 x CR123A MOSKITO: 2 x CR123A	4 x CR123A VECTOR: 1 x 2CR5	4 x CR123A LRTV: BT-70651 (EU) or BB-2847 (USA)
Battery capacity (20 °C)	50 orientations	50 orientations	50 orientations
<b>Environmental Specification according to MIL-STD-810G</b>			
Operating temperature (STANAG) <sup>4)</sup>	C1 to A1	C1 to A1	C1 to A1
Storing temperature (STANAG) <sup>4)</sup>	C1 to A2	VECTOR21/23: C1 to A1 VECTOR Nite: C1 to A2	C1 to A1
<b>Physical Data</b>			
Dimensions (L x W x H) (without tripod)	160 x 185 x 330 mm	205 x 178 x 345 mm	312 x 235 x 400 mm
Weight (incl. batteries and tactical tripod)	< 4 kg	< 4.5 kg (V21, V23) < 4.8 kg (V Nite)	< 6.1 kg

1) Preliminary

2) Minimum accuracy, better accuracy subject to further verification

3) Customer specific preset

4) Minimum temperature range, for detailed information ask Vectronix AG



Visit our microsite and find out all about the new STERNA system:  
[www.vectronix.com/sterna](http://www.vectronix.com/sterna)

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